



# Launch Mission Execution Forecast

**Mission:** Falcon 9 NASA Crew-3

**Issued:** 3 Nov 2021 / 0800L (1200Z)

**Valid:** 6 Nov 2021 / 2331 - 2341L (7/0331 - 0341Z)



**Forecast Discussion:** A weak frontal boundary will move into North Florida later today before stalling out across Central Florida. An area of low pressure will develop along this boundary over the Gulf of Mexico on Thursday, strengthening as it crosses the Florida peninsula Friday and Saturday. Stormy and windy conditions will accompany the low passage across Florida, with the low center expected to be northeast of the Cape by the primary launch window late Saturday night. Scattered showers wrapping around the backside of the low into the Spaceport will be the main concern for this launch window, along with liftoff winds with the rapidly deepening low center nearby.

The low will move up the southeastern US coast on Sunday, wrapping dry air into the state and bringing cool and breezy conditions for the backup launch windows. The main concerns for both a Sunday night and Monday night attempt will be a few Cumulus Clouds.

Launch Day	Probability of Violating Weather Constraints							
	60%	Primary Concerns: Liftoff Winds, Cumulus Cloud Rule, Surface Electric Field Rule						
	Weather Conditions					Additional Risk Criteria		
	Weather:	Scattered Showers	Type	Coverage	Base (ft)	Tops (ft)	Upper-Level Wind Shear:	Moderate
	Visibility:	5 miles	Cumulus	Broken	3,500	12,000	Ascent Corridor Recovery:	High
	Temp/Humidity:	64°F / 78%					Booster Recovery Weather:	High
	Liftoff Winds (200'):	330° 20 - 25 mph					Solar Activity:	Low
24-Hour Delay	Probability of Violating Weather Constraints							
	20%	Primary Concerns: Cumulus Cloud Rule						
	Weather Conditions					Additional Risk Criteria		
	Weather:	None	Type	Coverage	Base (ft)	Tops (ft)	Upper-Level Wind Shear:	Low
	Visibility:	7 miles	Stratocumulus	Scattered	3,000	5,000	Ascent Corridor Recovery:	High
	Temp/Humidity:	63°F / 60%					Booster Recovery Weather:	High
	Liftoff Winds (200'):	010° 12 - 17 mph					Solar Activity:	Low
48-Hour Delay	Probability of Violating Weather Constraints							
	20%	Primary Concerns: Cumulus Cloud Rule						
	Weather Conditions					Additional Risk Criteria		
	Weather:	None	Type	Coverage	Base (ft)	Tops (ft)	Upper-Level Wind Shear:	Low
	Visibility:	7 miles	Stratocumulus	Scattered	3,000	5,000	Ascent Corridor Recovery:	Moderate
	Temp/Humidity:	70°F / 60%					Booster Recovery Weather:	Moderate
	Liftoff Winds (200'):	020° 10 - 15 mph					Solar Activity:	Low

**Note:** The Probability of Violation (POV) is the chance that a Lightning Launch Commit Criteria (LLCC) or certain user constraints (surface winds, precipitation, and temperatures, etc.) will be violated during the launch window. It does not take into account upper-level wind shear, booster recovery weather, and solar activity.

**Next Forecast Will Be Issued** 4 Nov 2021